



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------|------------------|
| 09/733,549  | 12/07/2000  | William C.Y. Lee     | G&C I39.147-US-U1        | 1752             |
| 22462   | 7590        | 07/28/2004           |                          |                  |
| GATES & COOPER LLP<br>HOWARD HUGHES CENTER<br>6701 CENTER DRIVE WEST, SUITE 1050<br>LOS ANGELES, CA 90045 |             |                      | EXAMINER<br>HOM, SHICK C |                  |
|   |             |                      | ART UNIT<br>2666         | PAPER NUMBER     |

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                         |                     |  |
|------------------------------|-------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>  | <b>Applicant(s)</b> |  |
|                              | 09/733,549              | LEE ET AL.          |  |
|                              | Examiner<br>Shick C Hom | Art Unit<br>2666    |  |

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 07 December 2000.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5,7-12 and 14-32 is/are rejected.
- 7) Claim(s) 6,13 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities: in page 1 lines 5-24 update status of co-pending applications.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. Claims 4, 5, 7, 11, 12, 14, 17, 22, 28, and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4, 11 lines 1 and 2 which recite "the header" and "the headers," respectively, lack clear antecedent basis because no header and headers have been previously recited in the claims and therefore the limitation is not clearly understood. In claim 5 line 1 which recite "the mapping step" and claim 12 which recite "the means for mapping" lack clear antecedent basis. In claim 7 line 1 which recite "the estimating step" lacks clear antecedent basis. In claim 14 line 1 which recite "the means for estimating" lack clear antecedent basis. In claims 17, 22 line 2 which recite "the frame's number" lack

Art Unit: 2666

clear antecedent basis. In claims 28, 30 lines 1 and 2 which recite "the indicator field," "the parity for the subset," and "the same relative position" lack clear antecedent basis.

**Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 7-9, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Laakso et al. (6,456,605).

Regarding claims 1 and 8:

Laakso et al. disclose the method and apparatus for controlling transmit power in a wireless communications system, comprising: (a) determining a bit error rate for an orthogonal code included in a frame transmitted by the wireless communications system; and (b) adjusting transmit power in the

Art Unit: 2666

wireless communications system based on the determined bit error rate (see col. 8 lines 20-49 which recite each frame being divided into slots using orthogonal spreading codes and col. 19 lines 45-64 which recite the method of controlling transmit power by calculating and estimating the bit error rate and frame error rate).

Regarding claims 2 and 9:

Laakso et al. disclose wherein the determining step further comprises calculating the bit error rate for the orthogonal code and then estimating the bit error rate for the frame based on the calculation (see col. 19 lines 45-64 which recite the method of controlling transmit power by calculating and estimating the bit error rate and frame error rate).

Regarding claims 7 and 14:

Laakso et al. disclose wherein the estimating step comprises extrapolating the bit error rate for the frame from the bit error rate for the orthogonal code (see col. 19 lines 45-64).

5. Claims 15-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kang (6,397,043).

Regarding claims 15 and 20:

Art Unit: 2666

Kang discloses the method and apparatus for re-transmitting frames with errors in a wireless communications system, comprising: (a) determining whether a frame was received in error during a transmission in the wireless communications system; and (b) increasing transmit power for a re-transmission of the frame received in error in the wireless communications system (see col. 5 lines 43-44, col. 6 lines 41-47, Fig. 6, and col. 6 line 66 to col. 7 line 18 which recite that if the error rate count is higher than a specified level then message is re-transmitted and the transmit power is increased).

Regarding claims 16 and 21:

Kang discloses wherein the increasing step comprises immediately increasing the transmit power in when the frame is received in error (see col. 6 lines 41-47 which recite increasing the transmit power of the frame).

Regarding claims 17 and 22:

Kang discloses wherein the increasing step comprises increasing the transmit power in accordance with the frame's number (see col. 2 lines 47-53 which recite reporting the number of bad frames received clearly reads on the frame's number, col. 5 lines 26-31 which recite determining the transmit power based on error, i.e. bad frames received, and col. 6 lines 41-47 which recite increasing the transmit power due to error).

Art Unit: 2666

Regarding claims 18 and 23:

Kang discloses wherein the increasing step comprises increasing the transmit power in accordance with an amount of data transmitted (see col. 2 lines 47-53 which recite reporting the number of bad frames received, i.e. the amount of data transmitted, col. 5 lines 26-31 which recite determining the transmit power based on error, i.e. bad frames received, and col. 6 lines 41-47 which recite increasing the transmit power due to error).

Regarding claims 19 and 24:

Kang discloses wherein the increasing step comprises increasing the transmit power by steps when one or more starting frames are received in error (see col. 3 line 65 to col. 7 line 24 and col. 6 lines 24-35 which recite using the pilot signal and frame error to control the transmit power level clearly reads on using one or more starting frames).

6. Claims 25, 27, 29, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilson (6,718,347).

Regarding claims 25 and 29:

Wilson the method and apparatus for re-transmitting frames with errors in a wireless communications system, comprising:  
(a) determining whether a portion of a frame was received in

Art Unit: 2666

error during a transmission in the wireless communications system; and (b) invoking a re-transmission of the portion of the frame received in error without invoking a re-transmission of the entire frame in the wireless communications system (see col. 10 lines 27-43 which recite the wireless communication link and col. 17 lines 35-49 which recite error recovery where only a smaller frame of data are re-transmitted and not the entire block clearly anticipate re-transmission of the portion of the frame received in error).

Regarding claims 27 and 31:

Wilson discloses wherein the portion comprises a subset of bits in the frame (see col. 17 lines 35-49 which recite portion of the 1 Kbyte frame).

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 2666

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 26, 28, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (6,718,347) in view of Conrow et al. (5,526,409).

Regarding claims 26, 28, 30, and 32:

For claims 26, 28, 30, and 32, Wilson discloses the method and apparatus described in paragraph 6 of this office action. Wilson discloses all the subject matter of the claimed invention with the exception of wherein the frame includes an indicator field comprised of a plurality of bits and one of the bits in the indicator field indicates a parity for the portion of the frame received in error as in claims 26, 30 and wherein each bit

Art Unit: 2666

in a particular position of the indicator field represents the parity for the subset of bits in the same relative position in a data portion of the frame as in claims 28 and 32.

Conrow et al. from the same or similar fields of endeavor teach that it is known to provide the frame including an indicator field comprised of a plurality of bits and one of the bits in the indicator field indicates a parity for the portion of the frame received in error wherein each bit in a particular position of the indicator field represents the parity for the subset of bits in the same relative position in a data portion of the frame (see col. 18 lines 7-24 which recite the frame including an indicator field and the parity bit). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the frame including an indicator field comprised of a plurality of bits and one of the bits in the indicator field indicates a parity for the portion of the frame received in error wherein each bit in a particular position of the indicator field represents the parity for the subset of bits in the same relative position in a data portion of the frame as taught by Conrow et al. in the communications method and apparatus of Wilson. The frame including an indicator field comprised of a plurality of bits and one of the bits in the indicator field indicates a parity

Art Unit: 2666

for the portion of the frame received in error wherein each bit in a particular position of the indicator field represents the parity for the subset of bits in the same relative position in a data portion of the frame can be implemented by providing this frame format of Conrow et al. in the frame format of the method and apparatus of Wilson. The motivation for providing frame format including an indicator field comprised of a plurality of bits and one of the bits in the indicator field indicates a parity for the portion of the frame received in error wherein each bit in a particular position of the indicator field represents the parity for the subset of bits in the same relative position in a data portion of the frame as taught by Conrow et al. in the communication method and apparatus of Wilson being that it provides more efficiency for the system since the system can interface, using the Communication System Interface CSI, with known communication systems in a standard format.

10. Claims 3-7 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso et al. (6,456,605) in view of Maru (6,385,180).

Regarding claims 3-5 and 10-12:

Art Unit: 2666

For claims 3-5 and 10-12, Laakso et al. disclose the system and method described in paragraph 4 of this office action. Laakso et al. disclose all the subject matter of the claimed invention with the exception of wherein the orthogonal code replaces a header in the frame transmitted by the wireless communications system as in claims 3, 10; mapping the header to the orthogonal code using a table, wherein the table associates the headers to the orthogonal codes as in claims 4, 11; and wherein the mapping step is performed at call set up as in claims 5, 12.

Maru from the same or similar fields of endeavor teach that it is known to provide the orthogonal code replaces a header in the frame transmitted by the wireless communications system (see col. 3 lines 26-27); mapping the header to the orthogonal code using a table, wherein the table associates the headers to the orthogonal codes (see col. 7 line 62 to col. 8 line 8); wherein the mapping step is performed at call set up (see col. 5 lines 33-48). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the orthogonal code replaces a header in the frame transmitted by the wireless communications system; mapping the header to the orthogonal code using a table, wherein the table associates the headers to the orthogonal codes; wherein the

Art Unit: 2666

mapping step is performed at call set up as taught by Maru in the communications method and apparatus of Laakso et al. The orthogonal code replacing a header in the frame transmitted by the wireless communications system; mapping the header to the orthogonal code using a table, wherein the table associates the headers to the orthogonal codes; wherein the mapping step is performed at call set up can be implemented by using the orthogonal code in the header including using the mapping table at call set up of Maru in the method of Laakso et al. The motivation for having the orthogonal code replacing a header in the frame transmitted by the wireless communications system; mapping the header to the orthogonal code using a table, wherein the table associates the headers to the orthogonal codes; wherein the mapping step is performed at call set up as taught by Maru in the communication method and apparatus of Laakso et al. being that it provides more efficiency for cell search for synchronization in Laakso et al.

**Allowable Subject Matter**

11. Claims 6 and 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

**Conclusion**

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moon et al. disclose a device and method for controlling powers of orthogonal channel and quasi-orthogonal channel in CDMA communication system.

Agin discloses a method for improving performances of a mobile radiocommunication system using a power control algorithm

Kim et al. disclose a data communication device and method for mobile communication system with dedicated control channel.

Ling et al. disclose a method and apparatus for determining the closed loop power control set point in a wireless packet data communication system.

13. Any response to this nonfinal action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 872-9306, (for Technology Center 2600 only)

Art Unit: 2666

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (2600 Receptionist at (703) 305-4750).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick Hom whose telephone number is (703) 305-4742. The examiner's regular work schedule is Monday to Friday from 8:00 am to 5:30 pm EST and out of office on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao, can be reached at (703) 308-5463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



SHICK HOM  
RCA COMMUNICATIONS

SH

July 13, 2004